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GUIDELINES AND PROPOSALS ON STRATEGIES FOR
IMPROVING NATIONAL INSTITUTIONAL CAPABILITIES
FOR ANALYSING RURAL RESOURCE PRODUCTIVITY INDICATORS

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GUIDELINES AND PROPOSALS ON STRATEGIES FOR IMPROVING NATIONAL INSTITUTIONAL CAPABILITIES FOR MONITORING HUMAN RESOURCES PRODUCTIVITY INDICATORS

(a) Introduction

The Conference of Ministers Responsible for Human Resources Planning, Development and Utilization has, in its first and second meetings, emphasized the need to evolve an integrated approach to the planning, development and utilization of human resources. Raising the levels of productivity of human resources, was also recognized as being the ultimate objective of any national or regional efforts to plan and develop human resources.

In order to do so effectively, it is necessary to evolve a system for monitoring productivity indicators with a view to identifying factors that depress worker productivity and to instituting appropriate measures to redress them.

An indicator is something which gives an indication of the character or performance of something of which it may or may not be a part. For example a national school enrolment ratio is an indicator of educational levels within an economy, not of school enrolment. Therefore, identifying indicators requires first an identification of that which they measure. Which means, that, in this case, to talk of indicators of human resources productivity calls for a clear understanding of what human resources productivity constitutes.

In the first place, it is necessary to be clear as to the meaning of human resources: they are the totality of skills, knowledge, attitudes and resourcefulness available to an economy for the manipulation of natural and physical resources towards the production of goods and the provision of services. In a word they are the workforce. Their aggregate productivity is the totality of value-added they can by virtue of their attributes, contribute to production i.e. the volume and value of their collective output. Their marginal productivity is what one worker is able to produce within a given time frame and considering the inputs provided him for production.

To be able to monitor human resources productivity indicators one first requires a knowledge of what those indicators are. The most obvious indicator of productivity is output - both aggregate and marginal. Improving the latter type of productivity gives rise to increases in the former in the long run. Therefore for gains in aggregate labour productivity to be achieved, one needs to identify indicators of productivity, determine factors that depress it and evolve strategies of the type that would increase it. This calls for mechanisms to monitor the behaviour of identified productivity indicators with a view to correcting imbalances as soon as they emerge.

The factors that give rise to high productivity of human resources are many. These can be termed "input" indicators i.e. factors which create the conditions required for human resources to be more productive. There are also those indicators which permit a measurement of the degree of productivity of human resources i.e. the sum total of the physical and mental effort contributed to production. There would be "output" indicators.

This paper will provide guidelines on methods of identifying both input and output indicators of human resources productivity, discuss some problems associated with their identification as well as with measures of productivity, propose a strategy for monitoring the productivity of human resources and propose some measures for improving capabilities for monitoring human resources productivity indicators.

(b) Indicators of Low Human Resources Productivity

Open unemployment and underemployment are the manifestations of low or zero worker productivity. Unemployment describes workers who are actively seeking opportunities to be engaged in socially or economically productive activities for pay, profit or own consumption, but who have failed in their search to be so engaged. These workers are completely unproductive and if anything are a liability to their societies and their economies. The only way to make them productive is to get them engaged in the process of producing goods and providing services of economic and social utility.

The problem of low worker productivity is one that affects those who are already in the work force. When these individuals' productivity levels are low, they are described as being underemployed. This employment condition occures when the following prevail:

(i) productivity, ceteris paribus, is actually lower than it should be with the amount of time the worker spends on the job;

(ii) the worker is engaged in second-choice employment activities because jobs of his preference and qualifications are not available;

(iii) the prematurely retired able-bodied workers who for some reason or another are pushed out of the work force, in spite of their willingness and ability to work and their availability for work;

(iv) workers who may actually be on the job full-time, but whose productivity is impaired because of health problems caused by endemic diseases or malnutrition for example;

(v) workers who for reasons of personality or of inadequate job inputs spend a long time on the job only to achieve a relatively low level of productivity;

(vi) those who can only work part-time for a few hours a day;

(vii) discouraged workers - those who are seeking work or opportunities of working longer hours because they believe that they have little chance in the labour market of securing such work;

(viii) wage-earners or self-employed persons engaged in extremely low productive activities for which they earn low wages or gain low incomes;

(ix) family labour working without pay who produce relatively low outputs and earn relatively low incomes.

These underemployment categories are not mutually-exclusive. All told, they denote a production situation in which:

(i) labour can be released from a given economic activity, because of its redundancy without reducing overall output,

(ii) the excess of manpower available over manpower needed to effectively carry out production activities under existing methods and capital stock;

(iii) labour time and potential which could be released should there be simple changes in methods of production without any additional increase in capital stock,

(iv) the amount of labour that could be released by a more fundamental change in methods of production including substantial capital investments.

All these forms of low worker productivity affect the labour force in African economies in a quite serious manner. In the peasant economy agricultural production cycles are such as to leave a good number of man/years idle. Cumulatively, this accounts for a large proportion of low aggregate worker productivity. In the industrial and service sectors, changing technologies are also changing the skill needs and profiles of the work force without a corresponding change in its skill composition, to the extent that the skill input to production is becoming less productive.

The greatest threat to human resources productivity in Africa is what is referred to as "potential" unemployment. This phenomenon implies that there are other, more efficient methods of production in other regions of the world and that if these production methods were introduced into highly labour-intensive, predominantly agricultural economies, a good number of workers would be rendered unemployed. This form of underemployment really underscores the technology and skills gap which separates developed economies from underdeveloped ones. It is also a feature of underdevelopment.

Human resources productivity exists wherever it is shown that returns to labour in a particular area of economic activity is less than could have been obtained were labour utilized in another, similar area with the skills and capabilities necessary to operate in that area.

(c) Output Indicators of Productivity

The real difficulty in correcting situations of low productivity is first to identify its existence. Zero productivity is easily identifiable through open unemployment. What is more elusive is to attempt the same in respect of low productivity levels among the working population i.e., to identify underemployment. To measure it, most studies insist on one or more of the following criteria: (i) time, (ii) intensity of work (iii) value or volume of output. More complex measurement methods include:

(i) The wage index. This concept has, as its premise, that gains in real wages depend on gains in productivity. Rees observes that "gains in the real income per unit of input of any group furnishing inputs to the production process must come either at the expense of another such group or as a result of getting more useful output per unit of input i.e. from gains in efficiency".[1/] Since gains in efficiency depend both on the skill of labour and on labour scarcity or abundance relative to other production inputs, high wages would become a function of high productivity enhanced by a high skills/capital mix. Therefore, low-paid workers would be those with a low marginal productivity.

(ii) Output per man-hour. This method consists of dividing the value or volume of total output by the total number of production worker man-hours worked, then comparing average productivity with the wage rate. The difference between the two, when divided by the total amount of labour (in man-hours) will indicate labour's marginal productivity. When it is abnormally low, it might indicate low worker productivity and a certain amount of underemployment.

(iii) Output per unit of capital and labour. Here it is recognized that output is as much a function of capital as it is of labour. Productivity is seen as resulting not only from the quality and quantity of labour input to production, but also from capital stocks and flows made available to labour. Since labour is to exploit capital for productivity to occur, a means of separating labour's contribution would be the best technique of measuring its aggregate productivity.

[1/] Rees, Albert, "Patterns of Wages, Prices and Productivity" in Wages, Prices, Profits and Productivity, The American Assembly, Columbia Univ., 1957, P.20

By this technique, underemployment will be determined should it be found that labour's marginal productivity is abnormally low. It would then be necessary to delve into the reasons for this with a view to instituting corrective measures to raise labour productivity.

(d) Problems of Identifying Output Indicators of Productivity

In African countries, wage-related indicators are weak measures of productivity. That incomes are low does not necessarily mean that labour is not being utilized to the optimum. Invariably, incomes are low because productivity is low due mainly to insufficient capital inputs.

The time criterion should also be used with caution. The predominance of subsistence agricultural activities in African economies, the level of development of African agriculture, and production methods in that dominant sector all determine the amount of time to be assigned to production activities. Also, short hours of work may be due to leisure preferences or to society's demands on the worker to fulfil certain social obligations. The latter may not be economically productive activities, but socially, they are of tremendous value.

It must also be realized that the output-per-man/hour measure is not always reflective of all the real factors that cause high productivity, because it is, itself reflective of efficiency of a number of enhancing variables: capital, skill levels, quality and quantity of support services, management and supervision.

It has been argued[1/] that the concept of productivity presumes a norm against which performance or output should be measured. Since different societies and cultures use different production methods and have varying levels of capability to provide capital to labour, the norm

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1/ See Charles E. Bishop «Underemployment of Labour in Southeastern Agriculture», Journal of Farm Economics, May 1984; A. Berry and R.H. Sobot «Labour Market Performance in Developing Countries: A Survey» World Development Vol. 6, 1978 pp 1199-1242.

cannot be universal. For each society or group of continguous societies, a different set of measurement criteria would have to be developed to reflect the realities surrounding their modes of production. Furthermore, marginal productivity measures should take into consideration personality and cultural characteristics such as motivation, skills, cultural norms etc. which differ from one society to the next and which, in any case are not very easy to measure. The wage, income or earnings measure of productivity should also be applied only with this caveat in mind. And in subsistence agriculture which is not monetized, real income should be expressed in levels of basic needs satisfaction rather than in terms of a particular bundle of goods and services. Thsi would take into account factors other than wage remuneration which only provides the power to purchase goods and services.

In their attempt to strengthen their capabilities to monitor human resources productivity, African Governments should be cognizant of the need to put in place an effective system of indicators and to avoid, in the process, problems and pitfalls that would give wrong diagnoses of adverse productivity conditions.

(e) Input Indicators of Human Resources Productivity

Human resources output indicators are influenced to a large extent by a number of input indicators. For manpower to be able to perform effectively, it requires knowledge, skills relevant work attitudes, resourcefulness, good health, a high level of motivation, adequate incentives and an environment conducive to work. These would have to be provided through various interventions from Government and employers in the private sector.

The development of human resources is the major intervention in creating skills and knowledge through education and training which are the main catalysts in adding value to the human contribution to production. High skill levels in an economy are a definite asset in raising productivity.

Health and nutrition levels also determine the potentials of workers to be highly productive. When they are low, they affect the worker's ability to produce and maximize his output. Health and nutrition programmes and policies are therefore very important in raising the productivity of the work force.

Fiscal and other incentives contribute a great deal to motivating the work force. It is through fiscal measures that workers are provided with amenities such as health facilities, roads, safe drinking water, subsidized food and housing, and other such amenities that conduce to greater comforts and render the working environment more enabling.

Working conditions also affect worker productivity so does management and supervision practices. In African countries these conditions have been deteriorating and have affected worker productivity tremendously. Management training can help reverse this trend and policies and programmes need to be evolved to make the work environment more conducive to raising productivity levels.

Incentives system in Africa require closer scrutiny. As things are now, they are so inadequate in most countries as to constitute a demotivating element for the work force.

The input indicators of, and strategies for raising human resources productivity in African countries are summarized in the following table:

Input Indicators of and Strategies for Raising Human Resources Productivity

	Input Indicators	Strategies
Education and Training	: Literacy rates : Country skill mix : Number of educational and training institutions : R & D activities : Pupil/teacher ratio : Budget allocations to education & training	: More opportunities for education and training : Curriculum development : Programmes of basic formal and non-formal mass education
Health and Nutrition	: Morbidity and mortality rates : Life expectency : Medical and health worker/ population ratio : Number of hospital beds : Accessibility to health facilities : Per capital caloric intake	: Health and nutrition programmes : Health information and education : Health worker training programmes : Rural health facilities
Working Conditions	: Management and supervision : Availability of work inputs : Incentives systems : Career mobility	: Improvement of management and supervision : Management training programmes : Adequate salaries, wages and incomes : Realistic producer prices : Realistic reward systems

(f) Measuring the Impact of Input Indicators on Human Resources Productivity

In all African countries, institutions, policies and programmes have been put in place to deliver services of the type that would create the stage for human resources to be more economically and socially productive. Educational and training facilities have multiplied over the years, health services have been increased significantly and rural social infrastructures have improved. Government institutions charged with the responsibility for implementing education, training and health policies have grown in size. In spite of all these, Africa's human resources are not very highly productive. A problem exists somewhere.

Efforts to evaluate the impact of programmes and services on human resources productivity have not been very impressive and the results even less so. Although mortality and morbidity rates have declined somewhat, health and nutritional difficulties still persist within the continent. In spite of gains in education and training, the incidence of educated unemployment continues to grow. This is attributed to the irrelevance of educational curricula in African countries. Most Governments are concerned about this undesirable situation, but have been unable to do much to improve it. In addition, African Governments are finding it increasingly difficult to provide the financial and other resources required to extend educational services to the majority of their people. For instance, illiteracy, in absolute terms, is on an increase within the region.

Management practices have contributed to Africa's productivity problems. Subjectivity in the operation of reward systems has brought about frustration and low morale among the work force, and led to a situation in which efficiency is not necessarily the criterion for reward in the form of promotions etc.

Working conditions are also deteriorating. Production inputs in agriculture and industry are so inadequate, that in the recent past output in both sectors has actually quite visibly declined. Raw materials for industrial production have not been adequately made available because of the well-known foreign exchange difficulties, and in the agricultural

sector, fertilizers, pesticides, seeds and other production inputs have not been made available to the farmers in sufficient amounts.

Rural development, to which most African Governments are committed, has lost the enthusiasm it had generated in the 1970's and efforts to satisfy basic needs of the rural masses by providing social and other basic services to rural folks have achieved relatively little. The result has been an acceleration of labour migration trends from rural to urban areas in all African countries.

These input indicators show that programmes and pracitces that should raise levels of productivity among Africa's human resources, have not been too effective in meeting the objective. African Governments should set in place a mechanism that would more effectively monitor the performance of these indicators with a view to instituting timely measures to preempt their adverse effects on human resources productivity. In addition, interface between all Government organs responsible for implementing policies and programmes in the indicator areas discussed, is a necessity for avoiding duplication of effort and waste of resources, and for achieving maximum effectiveness.

(g) Proposals

Because of the importance of human resources in the production process, it is imperative that conscious efforts be made to increase their productivity. In this the following are being proposed for action by African Governments:

(i) Ministries of labour should establish or strengthen if they already exist, departments for productivity planning and monitoring;

(ii) Ministries of labour should assume a leadership role in initiating measures for co-ordinating the work of ministries of education, health, agriculture, local government and other relevant organs of government so that they converge towards a common objective of contributing to raising the productivity of human resources;

(iii) Government establishment offices in conjunction with ministries of labour should review salary and wage policies with a view to determining whether or not they act as motivators and enhance productivity;

(iv) Fiscal measures should be applied to improve working environments particularly in rural areas. This should contribute significantly in stemming the outflow of workers from that important sector;

(v) Management training programmes should be stepped up to provide more opportunities for human resources managers to sharpen their management skills and be more effective in bringing out the best of the continent's workers;

(vi) Education and training programmes and content should be reviewed with a view to imparting the skills, knowledge and attitudes required to make the African a productive element in society;

(vii) Health programmes should emphasize preventive medicine and the reduction of the adverse effects of endemic diseases on Africa's workers;

(viii) Agricultural policies should be geared towards the objective of raising nutritional levels of the worker and be harmonized with preventive health programmes;

(ix) Governments should ensure that production inputs and materials are made available to the rural workers to enable him use his time and energies effectively;

(x) African Governments and third level educational institutions should conduct studies on problems of African productivity so as to provide to policy makers and practitioners a basis from which to evolve effective corrective measures.